SECTION 1
GENERAL

1.1 PURPOSE OF THE IMPLEMENTATION PROCEDURES. The purpose of this document is to provide:

a. Instructions for installation of the COTS in support of and used with the DSRS;
b. Instructions for installation of the DSRS;
c. Test to verify installs.

1.2 PROJECT REFERENCES. The Defense Software Repository System (DSRS) is an automated repository designed primarily to assist users in the reuse of assets. The project sponsor is the Defense Information Systems Agency/Joint Interoperability and Engineering Organization/ Center for Operational Support (DISA/JIEO/CFOS). The DSRS is operational at the DISA/JIEO/CFOS Software Reuse Program (SRP) site in Falls Church, VA, and at other remote sites designated by the SRP.

The following is a list of project references used during development of this Implementation Plan (IP). Unless otherwise indicated, all references are UNCLASSIFIED:

a. **Project Request or Other Initiation Documentation**

(1) *DSRS Interoperation Plan*, December 3, 1994.

(2) *DSRS/ASSET/CARDS Library Interoperation*, Final, Engineering Working Group, July 1993.

b. **Risk Analysis Studies**

A formal quantitative risk analysis for the DSRS has been conducted for DISA's implementation of the DSRS.

(1) *Risk Assessment of Defense Software Repository System* (DSRS), Center for Information Systems Security, August 1994.

(2) *DSRS Security Test and Evaluation* (STE), Center for Information Systems Security, October 1994.

c. **Other Pertinent Manuals or Documents**

(1) The DSRS system documentation follows the format standards of DoD-STD-7935A and consists of the following: Functional Description, Database Specification, System Specification, User Manual (for Windows and X/Motif), Librarian Manual (for Windows), Maintenance Manual, System Administration Manual, Implementation Procedures, Test Plan, and Test

Analysis Report.

(2) The DSRS security documentation consists of the following: Trusted Facility Manual, System Security Plan, Contingency Action Plan, and Security Features User Guide (included in the User Manuals).

d. **Standards or Reference Documentation**

(1) Programming Conventions

(a) X/Motif-based DSRS

This version will be written in ANSI C and C++. Pro*C is used to generate low-level calls to the database.

(b) Windows-based DSRS

This version will be written in Visual Basic using SQL*Net (Librarian only) and TCP/IP messages to retrieve information from the database.

(2) DoD Standards and References

The following references are used for the development of the system and its documentation:

(a) DoD-STD-7935A, *Military Standard - DoD Automated Information Systems (AIS) Documentation Standards,* 31 October 1988.

(b) *Technical Reference Model for Corporate Information Management, Version 1.1*, 27 November 1991.

(c) DoD Directive 5200.28, *Security Requirements for Automated Data Process (ADP) Systems*, 21 March 1988.

(d) DoD Directive 5200.1-R, *Information Security Program Regulations*, June 1986.

(e) CSC-STD-004-85, *Guidance for Applying the Department of Defense Trusted Computer Evaluation Criteria in Specific Environments,* (also known as "The Yellow Book"), 25 June 1985.

(f) DoD Directive 5200.28-STD, *Department of Defense Trusted Computer System Evaluation Criteria*, (also known as "The Orange Book"), 26 December 1985.

(g) DISA Instruction 6030-230-19, *Security Requirements for Automated Information Systems* (AIS), August 1991.

(3) System Documentation

(a) Oracle Documentation

1. *ORACLE7 Server Administrator's Guide*, Oracle Corporation, December 1992.

2. *ORACLE7 Server Messages and Codes Manual Release 7.1*, Oracle Corporation, May 1994.

3. *ORACLE7 Server Utility User's Guide Release 7.1*, Oracle Corporation, May 194.

4. *ORACLE7 Server SQL Language Reference Manual*, Oracle Corporation, December 1992.

5. *ORACLE7 Server for UNIX Administrator's Reference Guide Release 7.1*, Oracle Corporation, May 1994.

6. *SQL*Plus User's Guide and Reference Version 3.1*, Oracle Corporation, 1992.

7. *SQL*Net TCP/IP User's Guide Version 1.2*, Oracle Corporation, 1989.

8. *Setting Up SQL*Net TCP/IP for Windows Version 1.1*, Oracle Corporation, October 1993.

(b) SunOS 4.1.3 Runtime Documentation

1. *ORACLE7 for Sun SPARC SunOS 4.1.3 Installation and Configuration Guide Release 7.1.3*, Oracle Corporation, May 1994.

2. *System and Network Administration*, Sun Microsystems, Inc., 1990.

3. README for mSQL version 1.0 Beta Patch 5, February 1995.

(c) Solaris 2.3 Runtime Documentation

1. *ORACLE7 for Sun SPARC Solaris 2.3 Installation and User's Guide Release 7.1.3*, Oracle Corporation, July 1994.

2. *Solaris System Adminstrator's Guide*, Sun Microsystems Inc., 1993.

3. README for mSQL Version 1.0 Beta Patch 5, February 1995.

(d) SunOS 4.1.3 Development Documentation

1. *Solaris 1.1 Release and Install SunOS 4.1.3 and OpenWindows Version 3*, Sun Microsystems, Inc., August 1992.

2. *Demo Guide to XVT Development Solutions for C++*, XVT Software Inc., 1995.

3. *XVT Portability Toolkit Reference*, XVT Software Inc., December 1994.

4. *XVT-Power++ Reference*, XVT Software Inc., November 1994.

5. *Tools.h++ Introduction and Reference Manual Version 6 for XVT Development Solution for C++*, Rogue Wave Software, Inc., 1994.

6. *Installing SunSoft Developer Products on Solaris*, Sun Microsystems, Inc., August 1994.

7. *Guide to XVT Development Solution for C++*, XVT Software Inc., November 1994.

8. *XVT Development Solution for C++ Quick Reference*, XVT Software Inc., April 1995.

9. *XVT Graphical Extensions By Cygnus*, Cygnus Engineering, XVT Software Inc., February 1995.

(e) Solaris 2.3 Development Documentation

1. *Solaris 2.3 System Configuration and Installation Guide*, Sun Microsystems, Inc., October 1993.

2. *Demo Guide to XVT Development Solutions for C++*, XVT Software Inc., 1995.

3. *XVT Portability Toolkit Reference*, XVT Software Inc., December 1994.

4. *XVT-Power++ Reference*, XVT Software Inc., November 1994.

5. *Tools.h++ Introduction and Reference Manual Version 6 for XVT Development Solution for C++*, Rogue Wave Software, Inc., 1994.

6. *Installing SunSoft Developer Products on Solaris*, Sun Microsystems, Inc., August 1994.

7. *Guide to XVT Development Solution for C++*, XVT Software Inc., November 1994.

8. *XVT Development Solution for C++ Quick Reference*, XVT Software Inc., April 1995.

9. *XVT Graphical Extensions By Cygnus*, Cygnus Engineering, XVT Software Inc., February 1995.

1.3 ACRONYMS AND TERMS.

1.3.1 Acronyms.

ADP	Automated Data Processing
AIS	Automated Information System
ANSI	American National Standards Institute
ASSET	Asset Source for Software Engineering Technology
CARDS	Comprehensive Approach to Reusable Defense Software
CFSW	Center for Software
COTS	Commercial-Off-the-Shelf
CPU	Central Processing Unit
DBA	Database Administrator
DBMS	Database Management System

DDN	Defense Data Network
DISA	Defense Information Systems Agency
DOD	Department of Defense
DSRS	Defense Software Repository System
FSF	Free Software Foundation
FTP	File Transfer Protocol
ICS	Integrated Computer Solutions
IP	Internet Protocol
JIEO	Joint Interoperability and Engineering Organization
KB	Kilobyte
MB	MegaByte
MODEM	Modulator/Demodulator
OSF	Open Software Foundation
PPP	Point-to-Point Protocol
RA	Reusable Asset
RDBMS	Relational Database Management System
SGA	System Global Area
SID	System Identifier
SLIP	Serial Line Internet Protocol
SOP	Standing Operating Procedure
SQL	Structured Query Language
SRP	Software Reuse Program
STD	Standard

STE	Security Test and Evaluation
TCB	Trusted Computing Base
TCP	Transport Control Protocol
TCR	Test Condition Requirement
WWW	World Wide Web

1.3.2 Terms.

Asset	See entry below for RA.
Candidate RAs	A collection of assets that have been identified by searching the DSRS catalog.
Catalog	A collection of assets and their related information.
Client	The software operating on a user's PC that communicates with the software operating at the server where the DSRS repository resides.
Cooperating DSRS Site	A site that chooses to make its assets available for extraction by other DSRS sites.
Domain	The major category of assets to search.
Ethernet	The predominant form of local area network technology used with TCP/IP.
Extract	A function available in the DSRS software that allows the user to obtain desired RAs.
Foreign Site	Non-DSRS remote site that is interoperable with the DSRS.
Internet	A worldwide network of networks connecting computers at universities, research laboratories, and commercial and Government sites.
Interoperability	The concept of allowing multiple installations of the DSRS to communicate with each other and other reuse libraries, sharing catalogs and exchanging RAs.

Keywords	A set of terminology designed to convey the properties that an RA may have.
Librarian	(1) The individual who maintains the DSRS catalog. (2) A type of user who functions as a librarian and has a subset of the rights to perform any action on the DSRS.
Local Site	The site of the local repository.
Metric	A characteristic of an RA that is assigned a numeric value.
RA	Reusable Asset. An asset that has potential to be used more than once. Types of reusable assets include architectures, designs, software, test suites, software tools, document type definitions, documents and templates, and reuse library support items.
RA State	There are three RA States: Certified, Active and Archived. Only Active RAs are available to be candidate RAs. Certified RAs are being evaluated through certification procedures prior to being made available to users. Archived RAs have been identified as obsolete, but archiving is safer than deleting. The files of Archived RAs still appear on the system.
Remote Site	DSRS site that is interoperable with the DSRS.
Repository	The database entries and all the associated files that the database references.
Server	The machine where the DSRS resides and the DSRS software operating there that communicates with the client software operating on the user's PC.
Site	An installation of the DSRS server software.
Supervisor	A type of user who functions as a librarian and has the rights to perform any action on the DSRS.
System Administrator	An individual who maintains: (1) the computer system on which DSRS is operating, and (2) the tools that are required for the execution of the DSRS, such as the ORACLE database.
Telnet	A TCP/IP application for remote terminal emulation.
UID	Unique Identifier. An identifier for the RA that supports interaction with foreign (non-DSRS) sites.

Usage Log Log of RAs that have been extracted by programmer-level users. The values of this log may be viewed in the DSRS Librarian tool.